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National Institutes of Health

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Bethesda, MD 20892-5635

**Education**

2000–2006      Ph.D., Molecular Biotechnology, University of Washington, Seattle, WA.

1994–1999      B.S., Biochemistry and Molecular Biology, Pennsylvania State University,  
University Park, PA.**Experience****Center for Research on Genomics and Global Health  
National Institutes of Health, Bethesda, MD**2008-prsnt      *Research Fellow and Science Policy Analyst*

- Carry out research projects aimed at identifying genetic variants associated with common complex diseases such as type 2 diabetes and related traits.
- Analyze human genetic variation in the context of pharmacogenomics across multiple global populations.
- Develop projects focused on understanding the role of genomics in health disparities and analyze the ethical and social implications relevant to these issues.
- Develop and maintain resources aimed at providing information to both the scientific and lay communities on how culture, lifestyle, and genomics are related to global health.

**Office of the Director, National Human Genome Research Institute  
National Institutes of Health, Bethesda, MD**2008-2009      *Science Policy Analyst*

- Assist in advising the NHGRI Director on societal implications of genomics.
- Act as a liaison between community-based organizations and NHGRI and CRGGH.
- Analyze programs and public policies (both nationally and NIH-wide) that relate to genetics and genomics and identify opportunities to incorporate the understanding of human genetic variation and its role in health and disease.

**United States Senate****Office of U.S. Senator Barack Obama, Washington, DC**2008      *Legislative Assistant (Health and Science Policy)*2007-2008      *Genetics & Public Policy Fellow*

- Analyzed and reviewed legislation relevant to health and science policy.
- Identified areas for potential legislation within health and science policy and briefed the Senator on relevant policy issues.
- Met and discussed policy issues with constituents and recommended legislative action.
- Assisted and led in drafting public health legislation.

- American Society of Human Genetics &  
National Human Genome Research Institute, NIH, Bethesda, MD**  
2006 *Genetics & Public Policy Fellow*
- Performed background research and analysis on policy issues of importance to the human genetics community and prepared summaries on issues for a variety of audiences.
  - Writing tasks included preparation of testimony, policy analysis documents, points-to-consider documents, position statements and educational articles.
- Fred Hutchinson Cancer Research Center  
Seattle, WA**  
2000-2006 *Graduate Research Fellow*
- Profiled DNA methylation differences across multiple tissues using microarray technology.
  - Examined relative positioning of immunoglobulin locus with respect to major satellite DNA in ICF (Immunodeficiency, Centromeric instability, Facial anomalies) syndrome patients using fluorescence *in situ* hybridization.
  - Developed assays to introduce DNA sequence-specific drugs, called polyamides, into live cells for real-time monitoring of nuclear organization and chromosome dynamics.
- Department of Immunology  
University of Washington School of Medicine, Seattle, WA**  
1999-2000 *Research Technician II*
- Assisted in experiments aimed at resolving the genetic interval containing the determinant for interleukin-4 commitment in mice as predicted by quantitative trait locus analysis.
- Department of Biology  
Pennsylvania State University, University Park, PA**  
1998-1999 *Bioinformatics Assistant*
- Database management and analysis of plant chloroplast genomes from non-photosynthetic plants for evolutionary studies.
- Department of Biochemistry and Molecular Biology  
Pennsylvania State University, University Park, PA**  
1998-1999 *Research Assistant*
- Screened *Chlorella*-like viruses for novel methyltransferases, which were subsequently used for *in vitro* chromatin-structure mapping in *Saccharomyces cerevisiae*.
- GlaxoSmithKline (formerly SmithKline Beecham)  
King of Prussia, PA**  
1997-1998 *Cooperative Education Intern*
- Conducted stable DNA-mediated-transfection assays to test for complex of kinase proteins. Analyzed results using SDS-PAGE, immunoprecipitation and Western Blotting. Aided in demonstrating expression of novel tissue growth factor and independently established proper elution protocol for this protein.

## Honors and Awards

2010	Keystone Symposia Scholarship
2009	NIH Director's Award (group award for NIH Health Disparities Summit)
2007	NIH/NHGRI Merit Award
2006-2007	ASHG/NHGRI Genetics and Public Policy Fellowship
2005-2006	National Institutes of Health Genome Training Grant
2005	Acres of Diamonds Award, Minority Trainee Research Forum
2002-2005	Ford Foundation Predoctoral Diversity Fellowship
2000-2002	National Institutes of Health Genome Training Grant
1996-1998	Pennsylvania State University Opportunity Grant
1994-1996	Pennsylvania State University Academic Scholarship

## Memberships and Affiliations

2009-2012	Nominated and appointed to NIH Diversity Council (3-year term)
2007-prsnt	Federal Liaison and Life Member, Society for Advancement of Chicanos and Native Americans in Science (SACNAS)
2006-prsnt	Member, American Society of Human Genetics
2005	Member, American Society for Cell Biology
2005-2007	Co-founder/Director, IDEAS (Initiatives for Diversity in Engineering And Science)
About IDEAS:	Science and engineering have an underrepresentation of minorities at all levels. In response, IDEAS was formed to synergize change by bridging programs and efforts across organizations. IDEAS strives to use creative approaches to address disparities in education and health care.
2004-2006	Member, Minority Scientist Recruitment & Retention Coalition
2004	Member, American Association for the Advancement of Science

## Languages

Spanish	Reading- Functional; Writing- Basic; Speaking- Fluent
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## Publications (\*authors contributed equally)

1. \*Knerr S, \***Ramos E**, Nowinski J, Dixon K, Bonham V. (2010) Human difference in the genomic era: Facilitating a socially responsible dialogue. *BMC Medical Genomics*, 3:20.
2. **Ramos E**, Rotimi C. (2009) The A's, G's, C's, and T's of Health Disparities. *BMC Medical Genomics*, 2:29.
3. \*De Bustos C, \***Ramos E**, \*Young J, Tran RK, Menzel U, Langford CF, Eichler EE, Hsu L, Henikoff S, Dumanski JP, Trask BJ. (2009) Tissue-specific variation in DNA methylation levels along human chromosome 1. *Epigenetics Chromatin*, 2:7.
4. **Ramos E**, Chen G, Doumatey A, Shriner D, Gerry NP, Herbert A, Huang H, Zhou J, Christman MF, Adeyemo A, Rotimi C. (2010) Replication of GWAS loci for fasting plasma glucose in African Americans. (under review)
5. Shriner D, **Ramos E**, Chen G, Adeyemo A, Rotimi C. (2010) Detecting Haplotype Blocks in a Genome Diversity Project. (under review)

## **Legislative products** (on behalf of U.S. Senator Barack Obama)

110<sup>th</sup> Congress (introduced):

1. **S. 1873** Improving Emergency Medical Care and Response Act of 2007. A bill to amend the Public Health Service Act to establish demonstration programs on regionalized systems for emergency care, to support emergency medicine research, and for other purposes.
2. **S. 3142** Preventing Stillbirth and SUID Act of 2008. A bill to amend the Public Health Service Act to enhance public health activities related to stillbirth and sudden unexpected infant death.
3. **S. 976** Genomics and Personalized Medicine Act of 2007. A bill to secure the promise of personalized medicine for all Americans by expanding and accelerating genomics research and initiatives to improve the accuracy of disease diagnosis, increase the safety of drugs, and identify novel treatments.

110<sup>th</sup> Congress (signed into law):

1. **S.AMDT.1041** to S.1082 Food and Drug Administration Revitalization Act. To improve the safety and efficacy of genetic tests.
2. **S.AMDT.905** to S.761 America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science Act. To require the Director of Mathematics, Science, and Engineering Education to establish a program to recruit and provide mentors for women and underrepresented minorities who are interested in careers in mathematics, science, and engineering.
3. **S.AMDT.923** to S.761 America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science Act. To expand the pipeline of individuals entering the science, technology, engineering, and mathematics fields to support United States innovation and competitiveness.

## **Selected Teaching and Mentoring Activities**

1. Guest Speaker. "The Genome and Human Genetic Variation." Leadership Judges' Science School on Genomics, Medicine, and Discrimination, National Institutes of Health, Bethesda, MD (June 2010).
2. Guest Speaker. "NHGRI Career Discussion For Grad Students and Post-Docs." A Dialogue with the NIH National Human Genome Research Institute: Genomics and Healthcare, University of Utah, Salt Lake City, UT (May 2010).
3. Guest Speaker. "Diversity Mentor Lunch Series." Initiative for Maximizing Student Diversity, University of North Carolina. (January 2010).
4. Guest Facilitator. "Discussions with Scientists." SACNAS National Conference, Dallas, TX. (October 2009).
5. Guest Lecturer. "Genomics and Global Health." Graduate Course, Department of Health Behavior and Health Education. School of Public Health, University of Michigan. (September 2009).

6. Organizer, Facilitator, and Speaker. "NHGRI 2009 Summer Workshop in Genomics". National Institutes of Health. (August 2009).
7. Guest Speaker. "Facilitated Conversation: What is Leadership." SACNAS 2009 Summer Leadership Institute, Washington, DC. (July 2009).
8. Guest Lecturer. "Race and Genetics." Undergraduate Course on Health and Science Educational Disparities. Boston College. (March 2009).
9. Roundtable discussion. Current Topics in Genomics Research. NIH (August 2008).
10. Mentor. Trainee Program and Networking Session. American Society of Human Genetics 58<sup>th</sup> Annual Meeting. Philadelphia, PA (November, 2008).
11. Guest Lecturer. "The Role of Race in the Genomic Era: Policy Implications." Graduate Course, Department of Health Behavior and Health Education. School of Public Health, University of Michigan. (September 2008).
12. Mentor. Directly trained undergraduate student in basic research skills and techniques. (2004-2006).
13. Guest Panelist. University of Washington Genomics Outreach for Minorities (UWGenOM) Project summer symposium. Discussion on diversity and education issues directed at pre-college students. (2004, 2005).
14. Volunteer undergraduate chemistry tutor. (2004-2005)

### **Selected Presentations at Conferences and Professional Meetings**

1. Guest Speaker. "The A's, G's, C's, and T's of health disparities". Genomics session of the SACNAS National Conference, Anaheim, CA (October 2010).
2. Guest Speaker and Panelist. "The Applications and Implications of Genetic Information". Gordon Research Conference on Science & Technology Policy, Waterville Valley, NH (August 2010).
3. Guest Speaker. "NHGRI 2010 Summer Workshop in Genomics". National Institutes of Health. (August 2010).
4. Guest Speaker. "Human Genetic Variation." South Dakota Spring Judicial Conference, Oacoma, SD (May 2010).
5. Guest Speaker. "Genetics of Diabetes." Community Faces: A Genetics and Health Forum, Salt Lake City, UT (April 2010).
6. Poster Presenter. "Replication of GWAS loci for fasting plasma glucose in African Americans." Keystone Symposium on Diabetes, Whistler, British Columbia (April 2010).
7. Guest Speaker. "Science and Policy." Center for Undergraduate Research and the Advancement of Technological Education (CURATE), webinar. (March 2010).

8. Guest Keynote. "Communicating Breakthroughs in the Genomic Era." DNA-LEAP Educator Symposium, Northwest Association for Biomedical Research, Seattle, WA. (March 2010).
9. Poster Presenter. "The Role of Genomics in Health Disparities." American Public Health Association 137<sup>th</sup> Annual Meeting, Philadelphia, PA (November 2009).
10. Guest Speaker. "From Bench to Bills (and back):The Intersection of Science and Policy". Department of Genome Sciences, University of Washington (October 2009).
11. Guest Speaker; roundtable discussion with postdoctoral scholars. "The Role of Genomics in Health Disparities." Center for Research on Ethnicity, Culture, and Health, University of Michigan. (September 2009).
12. Guest Speaker. "Legal Implications in the Genomic Era." Deployment Workshop Initiative, Advanced Science and Technology Adjudication Resource (ASTAR) Center, Inc. Clearwater, FL. (June 2009).
13. NIH/NHGRI Representative. "Federal Roundtables Session." Asian & Pacific Islander American Health Forum Voices Conference, Washington, DC. (June 2009).
14. Guest Speaker. "Policy, Politics, and Ph.D.'s: A Genetics Perspective." Department of Biology, Boston College. (March 2009).
15. Moderator. "Supporting Undergraduate Education in Capacity-Building towards Eliminating Health Disparities." NIH Summit on Eliminating Health Disparities. (December 2008).
16. Guest Speaker. "Policy, Politics, and Ph.D.'s: How Science and Policy Intersect." Johns Hopkins Medical Institutions. (November 2008).
17. Guest Speaker. "Policy, Politics, and Ph.D.'s: How Science and Policy Intersect". Department of Microbiology, University of Pennsylvania. (October 2008).
18. Guest Speaker. "The Role of Race in the Genomic Era: Policy Implications and Clinical Decision Making." Center for Research on Ethnicity, Culture, and Health, University of Michigan. (October 2008).
19. Co-organizer. "Understanding the Role of Genomics in Health Disparities: Towards a Research Agenda." Sponsored by the NHGRI, NCHMHD, and NCI. (September 2008)
20. Guest Speaker. "NHGRI Programs." DHHS-HACU Professions Capacity Building Program. National Institutes of Health, Bethesda, MD (July 2008).
21. Oral presentation. "Methylation profiling using a human chromosome 1 minimal tiling path array." Society for Advancement of Chicanos and Native Americans in Science Conference. Denver, CO (2005).
22. Oral presentation. "Dynamics of specific DNA sequences in live mammalian cells." Acres of Diamonds Award at the Minority Trainee Research Forum. National Institutes of Health, Bethesda, MD (2005).